

STATEMENT OF DR. KIRK SMITH, DVM, PHD
BEFORE THE
U.S. HOUSE SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS
OF THE COMMITTEE ON ENERGY AND COMMERCE
July 31, 2008

Chairman Stupak and Members of the Subcommittee,

My name is Kirk Smith, and I am Supervisor of the Foodborne Diseases Unit at the Minnesota Department of Health. Thank you for inviting me to speak on our role in the *Salmonella* Saintpaul investigation. We were not highly involved in the national investigation early on. Then, from June 23rd through June 27th, our state Public Health Laboratory received 10 *Salmonella* Saintpaul isolates from ill Minnesota residents who had gone to the doctor and been tested for *Salmonella* at a clinical laboratory. My foodborne disease epidemiology staff immediately began the process of interviewing these patients. By June 30th, several patients had reported eating at the same restaurant. That same day, we visited the restaurant to assess illness in foodworkers, determine the exact ingredients in various menu items, and request credit card receipts to identify other potentially exposed individuals to interview.

Ill and non-ill patrons were interviewed in detail about the menu items and ingredients they had consumed. By identifying what ingredients were in each menu item, we knew if an individual ate fresh tomatoes, jalapenos, or cilantro, etc., even if they couldn't discern or recall all of the specific ingredients in a menu item. Then we statistically compared foods eaten by ill people to those eaten by non-ill people.

The ingredient specific analysis indicated that diced jalapenos were the cause of our restaurant outbreak. We sent our preliminary statistics to CDC on July 3rd, 3 days after we identified the restaurant as the source through patient interviews. Statistics were

updated and provided to CDC daily as the scope of our investigation grew. By July 8th, 5 days later, we had interviewed 19 restaurant-associated cases and 52 non-ill controls, and unequivocally implicated jalapenos.

On our first visit to the restaurant on June 30th, we also requested vendor invoices for produce items served on the implicated meal dates. Those invoices were given to the Minnesota Department of Agriculture, which conducted tracebacks. On July 3rd, we provided CDC and FDA with information on the possible sources of the jalapenos, all the way back to farms or distributors in Mexico. This part of the traceback took 3 days.

Why were we able to solve our outbreak so quickly in Minnesota? In short, we have an efficient, rapid, and thorough system. By law, when a clinical laboratory isolates *Salmonella* or another reportable foodborne bacteria from a patient, the lab is required to submit the isolate to our state Public Health Laboratory. Our lab confirms, serotypes, and DNA fingerprints all *Salmonella* isolates in real time; this is not done in many other public health laboratories. There is excellent communication between our lab and epidemiology staff; every day the lab provides us with a report of every isolate they have worked on.

Another reason for our success is that foodborne disease investigations in Minnesota are centralized at the state level. We routinely interview all reported *Salmonella* cases with a detailed questionnaire, and are able to re-interview patients with specific questions quickly as needed. In many other states, *Salmonella* cases are not routinely interviewed in a timely manner, and if they are, initial interviews are often done at the county level and may not contain sufficient detail. Centralized surveillance and

investigations, coordinated at the level of state or large city health departments, are especially crucial during multistate outbreaks due to commercially distributed food items.

Foodborne disease surveillance and investigation in the U.S. need to be improved. State and federal funding for these activities in public health departments has decreased substantially throughout this decade, and I believe that this affected the national investigation.

State and local health departments need to be able to rapidly confirm and type every *Salmonella* or *E. coli* O157:H7 isolate that is submitted. This is how we can learn that an outbreak is happening as early as possible. But many state public health laboratories cannot currently do this. Secondly, state and local health departments need to be able to rapidly interview every patient with *Salmonella* and *E. coli* O157:H7 with a detailed questionnaire, and to conduct cluster investigations rapidly. Again, this currently is not being done in most localities. The traceback efforts of federal agencies can only be as good as the quality and timeliness of epidemiologic information coming from state and local health departments.

The investment in foodborne disease surveillance will not prevent food contamination from happening, but it will enable outbreaks to be detected and the source identified much earlier. This will help limit the size of outbreaks, minimize the impact on the involved food industry, and identify the types of food products on which to focus our prevention measures.

Thank you.

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A restaurant-associated outbreak of *Salmonella* Saintpaul infections occurred in late June in Minnesota. The outbreak was quickly identified by the Minnesota Department of Health. Diced jalapeno peppers were implicated and traced back to multiple possible sources in Mexico within 3 days of the identification of the outbreak. This information was provided to the CDC and FDA on July 3. This successful investigation was enabled by a strong, centralized foodborne disease surveillance and investigation system at the Minnesota Department of Health, which collaborated closely with the Minnesota Department of Agriculture.

The large, nationwide outbreak illustrates that foodborne disease surveillance and investigation activities in the United States need to be improved. Effective investigations by federal regulators depend in large part on the timeliness and quality of epidemiologic information provided by state and local investigators. The Minnesota system could act as a model for foodborne disease surveillance and investigation in the United States. All state and local health departments should be able to confirm, serotype (*Salmonella*) and DNA fingerprint all submitted *Salmonella* and *E. coli* O157 isolates in real time, and they should be able to interview all cases with a detailed questionnaire in real time (this currently cannot be done in most localities). This would help identify outbreaks much more rapidly, which would limit the size of the outbreaks, minimize the impact on the involved food industry, and identify the types of food products on which to focus prevention measures.